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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/815,157

03/31/2004

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EXAMINER

GREENE, DANIEL LAWSON

ART UNIT

PAPER NUMBER

3694

MAIL DATE

DELIVERY MODE

09/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/815,157

Applicant(s)

MASTEROV ET AL.

Examiner

Daniel L. Greene Jr.

Art Unit

3694

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-13 is/are pending in the application.
- 4a) Of the above claim(s) 10-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/26/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/20/2007 has been entered.

Terminal Disclaimer

2. The Terminal Disclaimer filed 9/1/2006 has been disapproved due to lack of TD fee.

Response to Arguments

3. Applicant's arguments, see pages 6-7, filed 6/20/2007, with respect to section 9 of the previous Office action mailed 4/27/2007 have been fully considered and are persuasive. The objection of said section 9 has been withdrawn. The reasoning behind this is because applicant has made the record perfectly clear that NO NOVELTY lies within the voltage circuitry of the instant invention. That is, the electronics of the instant invention can be found off the shelf and require NO MODIFICATIONS to operate in the manner proposed by applicant. To be clear, Applicant has stated:

"As explained in the previous Response dated September 1, 2006, the "Voltage Pulse Circuitry" is a conventional feature, where the detailed illustration is not essential for a proper understanding of the invention. In fact, for example, paragraph [0030] of the publication of the Specification clearly states that the

voltage pulse circuitry 33 may be any voltage pulse circuitry known in the art or yet to be developed, and can provide an ion transport drive voltage to the ion chamber for a selected duration (i.e., a voltage pulse)."

Accordingly, there appears to be no novelty in the electronics of the apparatus itself.

4. Applicant's arguments, see pages 8-9, filed 6/20/2007, with respect to sections 10-11 of the previous Office action mailed 4/27/2007 have been fully considered and are persuasive. The objection of said sections 10-11 have been withdrawn because the drawings have been amended to include the proper reference signs.

5. Applicant's amendment of claim 1 has successfully overcome the rejection under 35 U.S.C. 101, as detailed in paragraph 14 of the previous Office action.

6. Applicant's arguments regarding section 16 of the previous Office action have been fully considered but they are not persuasive. As stated in said section 16, the method applicant is attempting to claim is open ended (comprising) and does NOT require the steps to be performed in the order listed in the claims, merely that the method comprises said steps. The Examiner has explained APA discloses the method of turning on a detector, zeroing out its leakage current and then measuring ion current. That is, measuring the leakage current after the voltage pulse has been turned off and after ion transport has stopped reads on zeroing out the meter BEFORE APPLYING the voltage and BEFORE ion transport has begun for the next measurement cycle and then determining a magnitude of the high-energy radiation flux dependent on the ion current

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signal and the leakage current signal reads on taking the measurement after zeroing out the meter. That is, the term "after" in the measuring a leakage current signal does not necessarily connote that the previous voltage application and ionization is the actual ion current that makes the determination of the energy flux.

7. Another way to look at this is to break down claim 1. Currently claim 1 reads as follows with the numbers being added by the Examiner to apparently show the desired order applicant wishes the method to set forth.

"A method for measuring high-energy radiation flux, comprising:

1. applying a voltage pulse for a predetermined time between electrodes in an ion chamber, wherein the ion chamber is filled with a gas capable of forming charged ions by high-energy radiation;
2. measuring an ion current signal related to ion currents induced by the voltage pulse while the voltage pulse is being applied to the electrodes;
3. measuring a leakage current signal after the voltage pulse has been turned off and after ion transport has stopped;
4. determining a magnitude of the high-energy radiation flux dependent on the ion current signal and the leakage current signal; and
5. outputting the result of the magnitude of the high-energy radiation flux. "

This method may also be considered as follows

"A method for measuring high-energy radiation flux, comprising:

3. measuring a leakage current signal after the voltage pulse has been turned off and after ion transport has stopped **(from the previous measurement pulse and subsequent ion transport)**;

6. ZEROING OUT THE DETECTOR TO ENSURE THE READING IS ZERO WITH ZERO INPUT

1. applying a voltage pulse for a predetermined time between electrodes in an ion chamber, wherein the ion chamber is filled with a gas capable of forming charged ions by high-energy radiation;
2. measuring an ion current signal related to ion currents induced by the voltage pulse while the voltage pulse is being applied to the electrodes;
4. determining a magnitude of the high-energy radiation flux dependent on the ion current signal and the leakage current signal **(BECAUSE THE DETECTOR HAS BEEN ZEROED IN A PREVIOUS STEP AFTER THE PREVIOUS MEASUREMENT)**; and

5. outputting the result of the magnitude of the high-energy radiation flux. "

Again, it appears applicant is merely attempting to claim the step of zeroing out a meter after taking one measurement and before taking another measurement.

Further, there is no novelty in subtracting the leakage current from a measurement AFTER the measurement instead of BEFORE the measurement because it is old and well known that the leakage current must be accounted for and subtracted from the readings of the detector to ensure that it is giving an accurate reading.

Again, the limitation "after ion transport has stopped" reads on the ion transport of the previous measurement.

The rest of Applicant's arguments hinge on the arguments directed towards the APA. Since the Examiner has explained why the APA still reads on the claimed invention then the other rejections in sections 17-19 of said previous Office action are still valid.

Accordingly, the rejections of sections 16 through 19 of the previous Office action are maintained and incorporated herein.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

8. Claims 1, 2, 4, 6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Admitted Prior Art (APA) for the reasons set forth in section 16 of the previous office action mailed 4/27/2007.

Claim Rejections - 35 USC § 103

9. Claims 1, 2, and 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA as applied to claims 1,2 and 4-9 above in view of any of Frommer, Experiment 2-8, or Spanswick for the reasons set forth in section 17 of the previous office action mailed 4/27/2007.

10. Claims 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA as applied to claims 1, 2, and 4-9 above, and further in view of More (US Patent # 6,889,152) for the reasons set forth in section 18 of the previous office action mailed 4/27/2007.

11. Claims 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of any of Frommer, Experiment 2-8, or Spanswick. as applied to claims 1, 2, and 4-9 above, and further in view of More (US Patent # 6,889,152) for the reasons set forth in section 19 of the previous office action mailed 4/27/2007.

12. Claims 1, 2, and 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA as applied to claims 1,2 and 4-9 above.

If applicant is of the opinion that APA does not disclose the method in the specific steps set forth within the claims, specifically measuring the leakage current with no voltage applied and no ion transport occurring IMMEDIATELY AFTER measuring the ion current signal, then it would have been obvious to one of ordinary skill in the art to perform said measurement and determine the ACTUAL incident radiation flux by subtracting the leakage current from the measured current.

That is, it is old and well known in the radiation measurement art to subtract the leakage current from the measured reading to ensure you have an ACCURATE reading. It is immaterial whether you subtract the leakage current BEFORE (zero the meter) or AFTER the measurement AS LONG AS the leakage current is subtracted AT SOME POINT.

Again, there is no novelty in merely subtracting the leakage current AFTER the measurement is made because the end result is the same, i.e. the leakage current has been removed.

Conclusion

13. Examiner's Note: The Examiner has cited particular columns and line numbers in the references as applied to the claims for the convenience of the applicant.

Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures

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may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel L. Greene Jr. whose telephone number is (571) 272-6876. The examiner can normally be reached on Mon-Thur.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P. Trammell can be reached on (571) 272-6712. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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